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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,363	05/01/2006	Bartholomeus Trommelen	P70704US0	1164

136 7590 03/17/2011

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EXAMINER	
BELYAEV, YANA	

ART UNIT	PAPER NUMBER
1741	

MAIL DATE	DELIVERY MODE
03/17/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,363	TROMMELEN ET AL.	
	Examiner	Art Unit	
	YANA BELYAEV	1741	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7,9,11,13 and 14* is/are pending in the application.

4a) Of the above claim(s) *7,9,11,13 and 14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2, and 4-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 22 December 2010 have been fully considered but they are not persuasive.

The Applicant argues that there is no teaching whatsoever in Akasaka, and no stated basis, to support the USPTO's assertion that "it would be obvious to only include measured values or information derived from measured values from measuring cycles that were recorded in another extrusion process in which the deviations in the film thickness from the target value lay within an acceptable tolerance range." Applicants respectfully submit that the asserted conclusion is an improper hindsight reconstruction, i.e., one based upon the Applicants" disclosure.

The examiner respectfully disagrees. Since there is no mention in the specification explicitly defining "another extrusion process," the examiner interprets "another extrusion process" to be any extrusion process that differs in the time at which it was carried out compared to a reference. Akasaka discloses that past time data is stored in a memory and made accessible to the computer (pg 25, line 49 to pg 26, line 7). The examiner interprets past time data as data from another/previous extrusion processes. Thus, the measured values or the information derived from the measured values originated only from measuring cycles that were recorded in another extrusion process.

However, Akasaka does not explicitly disclose that the measured values originates only from measuring cycles that were recorded in another extrusion process in which the deviations in the film thickness from the target value lay within an acceptable tolerance range. However, this

would have been obvious to one of ordinary skill in the art at the time of the invention since this would exclude outliers or measured values that fell within unacceptable tolerances, i.e. unacceptable data points. The motivation to exclude outliers or unacceptable data points (i.e. not reuse unacceptable data points) is to provide a higher degree of accuracy within the process in order to maintain the film thickness to a predetermined amount therefore rendering the process more efficient.

The applicant has not argued this position, but merely stated this is hindsight reconstruction. However, it would have been obvious to one of ordinary skill in any art that reusing data which falls outside of the target range does not make sense since it would create a product of lower quality.

The Applicant argues that the Office Action does not take into account that Akasaka does not address the problem of reducing the deviation in the thickness profile of the web after starting the extrusion process. Akasaka deals only with the problem of reducing deviation in the thickness profile during the normal production of the web.

The examiner respectfully disagrees. The way the claim is written, it seems that there are two periods of time: there is a predetermined period of time at the start of the extrusion process and a similar period of time during operation other than during the predetermined period of time. Akasaka states that past time data is stored in a memory and made accessible to the computer (pg 25, line 49 to pg 26, line 7). Thus, the examiner interprets that data from before the predetermined period of time at the start of the extrusion process is used to address the problem of reducing deviation in the thickness profile of the web after starting the extrusion process.

The Applicant argues that in contrast to the interpretation offered in the Office Action (see page 5), the claim 1 phrase "another extrusion process" is not any extrusion process that only differs in time. Applicants disclose that the thickness is controlled after the start of the extrusion process. The phrase "start of the extrusion process," however, can mean that there has been an interruption in the extrusion. Therefore, during a time period before starting the extrusion process, there has been no extrusion process. During this interruption, the extrusion machine is not operating. Based on Applicants' understanding, however, Akasaka deals only with a running, uninterrupted extrusion process.

The examiner respectfully disagrees. The applicant's definition of "start of the extrusion process" does not exclude there being an interruption in the extrusion process. Furthermore, Akasaka does not explicitly state that it is a running, uninterrupted extrusion process.

The Applicant argues that to be more precise, Akasaka teaches that only the values back to, for example, t=tk-2 and t=tk-3 are taken into account (see Akasaka page 14, numbered sections (4) and (6)), and page 11, equation (22)). And additionally, since the conditions at the start of the extrusion process are not mentioned, Akasaka does not teach which values are used. Since Akasaka discloses no values, they are, most likely, an initial value such as zero. The aforementioned situation, however, leads to a large thickness deviation at the beginning of the extrusion process -- and this is the problem that is solved by the instant invention. No solution to the problem is presented by Akasaka.

The examiner respectfully disagrees. Even if Akasaka does lead to a large thickness deviation at the beginning of the extrusion process and the instant application is trying to solve this problem, this is not clear according to the claims. Additionally, the statement that since the

conditions at the start of the extrusion process are not mentioned, Akasaka does not teach which values are used. Since Akasaka discloses no values, they are, most likely, an initial value such as zero, does not make logical sense. It is not clear what the conditions are at the start of the extrusion process because it is not stated, therefore it does not follow logically that because Akasaka discloses no vales, they are zero.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 4-6, 9, 11, 13, and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent EP0329157 (Akasaka hereinafter).

In regards to claim 1, Akasaka teaches a process for automatically controlling a thickness of an extruded film (pg. 2, lines 3-4 and 40-41) comprising: measuring thickness profile values of the extruded film with a thickness-measuring probe that is moved along be a surface of the film substantially perpendicular (x) to a conveying direction (z) of the extruded film, the thickness-measuring probe recording for each measuring cycle (MZ) a thickness profile (P) of the film at least across parts of an expansion of the film perpendicular (x) to the conveying direction (z), i.e. a thickness gauge is reciprocated along the width of the film; transmitting the

measured values to a control unit; storing the transmitted measured values in a storage unit, i.e. memory, providing statistical values of the film thickness using a computer by taking into account the measured values or information derived from the measured values using a definite number of measuring cycles (MZ); determining deviations in the statistical values of the film thickness from a target value; and generating control commands to a device for controlling the film thickness, i.e. thickness adjusting device, such that during a predetermined time-frame at a start of the extrusion process, measured values or information derived from the measured values is made accessible to the computer for a number of measuring cycles, and that the computer takes into account the measured values while providing the statistical values, at least a part of the measured values originating from the storage unit, which makes accessible the measured values or the information derived from the measured values to the computer, the measured values or the information derived from the measured values originating from measuring cycles that were recorded in another extrusion process in which the deviations in the film thickness from the target value lay within an acceptable tolerance range (Fig. 1; Claim 1, pg. 25, line 41 to pg. 26, line 7).

Since there is no mention in the specification explicitly defining "another extrusion process," the examiner interprets "another extrusion process" to be any extrusion process that differs in the time at which it was carried out compared to a reference. Akasaka discloses that past time data is stored in a memory and made accessible to the computer (pg 25, line 49 to pg 26, line 7). The examiner interprets past time data as data from another/previous extrusion processes.

The examiner points out that Akasaka teaches that the data from the measuring probe is measured and stored for the range in which the values fall within or do not fall within proximity of a target value (pg 25, lines 43-52), i.e. the values may be collected when a difference between an actual thickness and a thickness target value lay within "acceptable tolerances". Thus the limitation in claim 1 wherein it states "at least a part of the measured values originating from the storage unit, which makes accessible the measured values or the information derived from the measured values to the computer, the measured values or the information derived from the measured values originating from measuring cycles that were recorded in another extrusion process in which the deviations in the film thickness from the target value lay within an acceptable tolerance range" is encompassed by the teachings of Akasaka.

As for claim 1, Akasaka does not expressly disclose that "during a predetermined time-frame at a start of the extrusion process, measured values or information derived from the measured values" is taken from "a greater number of measuring cycles than those recorded by the thickness-measuring probe in a time- frame of length similar to the pre-determined time-frame during a normal operation".

It would be obvious to one of ordinary skill in the art at the time the invention was made to increase an amount of data collected by increasing the number of measuring cycles for which information is collected. The motivation for expanding the amount of data collected over an increased number of measuring cycles is to provide a higher degree of accuracy within the process in order to maintain the film thickness to a predetermined amount therefore rendering the process more efficient. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a higher degree of accuracy within the process in

order to maintain the film thickness to a predetermined amount during the start of the extrusion process, since at the start of the extrusion process there is no thickness information about the film.

As for claim 1, Akasaka does not expressly disclose that the measured values or the information derived from the measured values originate ONLY from measuring cycles that were recorded in another extrusion process in which the deviations in the film thickness from the target value lay within an acceptable tolerance range.

It would be obvious to one of ordinary skill in the art at the time the invention was made to only include measured values or information derived from measured values from measuring cycles that were recorded in another extrusion process in which the deviations in the film thickness from the target value lay within an acceptable tolerance range. This would thus exclude outliers or measured values that fell within unacceptable tolerances, i.e. unacceptable data points. The motivation to exclude outliers or unacceptable data points (i.e. not reuse unacceptable data points) is to provide a higher degree of accuracy within the process in order to maintain the film thickness to a predetermined amount therefore rendering the process more efficient.

In regards to claim 2, Akasaka teaches that the thickness-measuring probe is moved during a predetermined time-frame at the start of the extrusion process (pg 25, lines 47- 48); and in doing so determines for each time unit the measured values (pg 25, lines 43- 44); and makes the measured values accessible to the computer (pg 25, line 49 to page 26, line 7).
Akasaka does not expressly disclose that the measuring probe moves "more quickly along the surface of the extruded film than in normal operation" and that the collected data is thus taken

from a "larger number of measuring cycles than the number of measuring cycles used in normal operation".

It would be obvious to one of ordinary skill in the art at the time the invention was made to move the measuring probe more quickly. By moving the probe faster/more quickly, one would be able to collect more data from the measuring probe in a similar time frame and thus perform the necessary control modifications to correct between the deviations in the measured values compared to the set value in less time than "normal operation" therefore rendering the process more efficient. The motivation to increase the speed at which the probe moves is provided by Akasaka in that the conventional method has drawbacks in that the there is a large dead time for which it takes the thickness measuring probe to reach the end of the film such that it takes time for the corrections to be made by the control system (pg 3, lines 10-23). Moving the probe "more quickly" would be an obvious way to decrease the dead time. Therefore, it would have been obvious to one of ordinary skill in the art to obtain this invention.

In regards to claim 4 and 9, Akasaka teaches that various weighting factors (i.e. coefficients) are assigned to the measured values or the information derived from the measured values using different measuring cycles with which the contribution of the measured values or of the information derived from the measured values to the statistical values is defined (pg 25, lines 56-58).

In regards to claim 5, Akasaka further teaches that the coefficient which the data is multiplied by is subject to change and therefore teaches that these weighting factors are changed

at the start of the extrusion process (pg 27, lines 33-39).

In regards to claims 6, 11, 13, and 14, Akasaka teaches that the measured values or the information derived from the measured values using other extrusion processes stored in the storage device are assigned to the process parameters that prevailed when they were recorded (pg 4, lines 56-58). Akasaka teaches under summary of the invention that the thickness data memory stores thickness data of the film which is measured by the thickness gauge over the whole width of the film and which is thickness data of each portion of the film corresponding to each of the operating terminal devices (pg 4, line 56-58). The examiner is interpreting thickness data stored in the data memory to included data related the thickness of the film including process parameters and therefore the measured values or information derived from the measured values is stored along with corresponding process parameters.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YANA BELYAEV whose telephone number is (571)270-7662. The examiner can normally be reached on M-Th 8:30am - 6pm; F 8:30 am- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Daniels can be reached on (571) 272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. B./
Examiner, Art Unit 1741

/Matthew J. Daniels/

Supervisory Patent Examiner, Art Unit 1741